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Attorney Docket No. P22598
3723

In re application of : Konstanze SAATHOFF et al.
Serial No. : 09/554,343
Filed : September 14, 1999
For : MOTOR-DRIVEN SCREW DRIVER

Group Art Unit: 3723

Examiner: D. Meislin

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

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TECHNOLOGY CENTER R3700

Sir:

Transmitted herewith is an Appeal Brief (in triplicate) under 37 C.F.R. 1.192 in the above-captioned application.

- ☐ Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a previously filed statement.
☐ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
☐ A Request for Extension of Time.
☐ No Additional Fee.

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 18	20*	0	x 9=	\$	x 18=	\$0.00
Indep. Claims: 1	*3*	0	x 42=	\$	x 84=	\$0.00
Multiple Dependent Claims Presented			140=	\$	+280=	\$0.00
Appeal Brief				\$		\$320.00
Total:				\$	Total:	\$320.00

*If less than 20, write 20

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- ☐ Please charge my Deposit Account No. 19-0089 in the amount of \$____.
☒ A Check in the amount of \$320.00 to cover the appeal brief fee is included.
☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 19-0089.
☒ Any additional filing fees required under 37 C.F.R. 1.16.
☒ Any patent application processing fees under 37 C.F.R. 1.17, including any required extension of time fees in any concurrent or future reply requiring a petition for extension of time for its timely submission (37 CFR 1.136)(a)(3).

Neil F. Greenblum
Reg No. 28,394



P 598.A05

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Konstanze SAATHOFF et al.)

Group Art Unit: 3723

Appln. No. : 09/554,343)

Examiner: D. Meislin

Filed : September 14, 1999)

§ 371 Date : December 6, 2000)

For : MOTOR-DRIVEN SCREW DRIVER)

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OCT 31 2002

TECHNOLOGY CENTER R3700

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

This appeal is from the Examiner's final rejection of claims 1 - 18 as set forth in the Official Action of April 29, 2002.

A Notice of Appeal in response to the April 29, 2002 Final Office Action was filed August 29, 2002, along with a Request for a One-month Extension of Time. Further, the instant Appeal Brief is being timely submitted within two months of the filing of the Notice of Appeal, i.e., by October 29, 2002.

The requisite fee under 37 C.F.R. 1.17(c) in the amount of \$ 320.00 for the filing of the Appeal Brief is being paid by check submitted herewith. However, if for any reason the necessary fee is not associated with this file, the Commissioner is authorized to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No.

10/30/2002 JADD01 00000067 09554343

01 FC:1402 320.00 OP

Adjustment date: 01/30/2003 KZEWDIE
08/30/2002 AWONDAF1 00000172 09554343

01 FC:119 -320.00 OP

10/30/2002 JADD01 00000067 09554343
Adjustment date: 01/30/2003 KZEWDIE

01 FC:1402 -320.00 OP

01/30/2003 KZEWDIE 00000001 09554343

01 FC:2402 160.00 OP

Repln. Ref: 01/30/2003 KZEWDIE 0008541200
DAH:190089 Name/Number:09554343
FC: 9204 \$320.00 CR

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This appeal brief is being submitted in triplicate, pursuant to 37 C.F.R. 1.192(a).

(1) REAL PARTY IN INTEREST

The real party in interest is Johannes Lübbering AG by an assignment recorded in the U.S. Patent and Trademark Office on December 8, 2000 at Reel 011364 and Frame 0266.

(2) RELATED APPEALS AND INTERFERENCES

No related appeals and/or interferences are pending.

(3) STATUS OF THE CLAIMS

Claims 1 - 18, the only claims pending in the instant application, stand finally rejected.

(4) STATUS OF THE AMENDMENTS

No amendments have been entered subsequent to the mailing of the Final Office Action.

(5) SUMMARY OF THE INVENTION

The instant invention is directed to a motor driven manual wrench, which includes a motor drive and a head having an output tool shaft for coupling to a driving tool. (Specification page 3, lines 23 and 24). In an exemplary embodiment of the invention, the motor driven manual wrench, in addition to the motor drive, includes a ratchet drive with a torque limiter arranged as in a conventional torque wrench. (Specification page 3, lines 25 - 33). Moreover, the motor drive also includes its own torque limiter so that tightening of a

bolt with two different torques can be achieved without having to adjust or modify the manual wrench. (Specification page 3, line 34 - page 4, line 10).

Motor driven manual wrenches known by those ordinarily skilled in the art generally include an electric or compressed air drive, although other power supplies are also conceivable. These wrenches have an actuating grip, a motor, gears, and a clutch, (specification page 1, lines 6 - 26), and are generally employed in safety relevant screwing locations, e.g., steering or braking systems, as part of a two-step tightening process. The first step is to quickly drive the bolt (or driven element) to about 80% - 90% of a target tightening torque, followed by a second step of slow tightening to the target tightening torque. (Specification page 1, line 28 - page 2, line 5).

The first (fast) tightening step is performed by the motor driven wrench, which drives the bolt until its torque limiter, which is either directly incorporated in the wrench or, in the case of pneumatic tools, limited by air pressure with which the tool is driven, ceases the drive motor. The second (slow) tightening is performed by a hand actuated torque wrench, since the known motor driven manual wrenches cannot ensure the required precision. As is known, the precise torque in such manual wrenches can be adjustably set or permanently preset at the factory. (Specification page 2, lines 6 - 25).

To avoid the above-noted drawbacks of the prior art, the instant invention provides a single hand-held device that provides the fast speed driving of the known motor driven

manual wrenches along with the precision of the known manually operated torque wrenches, whereby the heretofore two step tightening procedure can be performed with a single device. In particular, in addition to the motor drive usually associated with the known manual wrench, the instant invention includes a ratchet drive with its own torque limiter. (Specification page 3, lines 19 - 32). In the exemplary embodiment, the manual wrench includes a head 1 and a drive unit with a drive motor and an integral torque limiter, which limits torque transmitted by the motor to an output shaft of the drive motor in a known manner. As these types of wrenches are well known, only the end of shaft 2 is illustrated. (Specification page 8, line 27 - page 9, line 2; and Figure 1). Thus, output shaft 4, to which a socket may be connected, is driven in a conventional manner by the drive motor to a desired torque.

In addition to the drive motor, head 1 of the manual wrench is also coupled to a torque limiter 5, which is designed as an articulated wrench in a manner known as a torque limiter. Torque limiter 5 includes a ratchet drive 6 with a change-over switch 7 for selecting a working direction for transmitting torque and an articulated joint 8 having an articulated body 9 gripped between a spring 10 and a support body 15. Tension of spring 10 can be set so that articulated joint 8 bends at the desired torque, i.e., support body 15 pivots around the axis of output shaft 4. (Specification page 9, line 8 - 23; and Figures 1 and 2).

In operation, the target torque of the torque limiter is usually set higher than the shut-

off torque for the motor drive, such that the two-step tightening can be performed by having the motor drive release at about 80% - 90% of the target torque of the torque limiter, and the remaining torque manually applied by ratchet drive 6, without changing tools. (Specification page 4, line 26 - page 5, line 9).

(6) ISSUES

(A) Whether Claims 1 - 18 Contain Subject Matter Which was not Described in the Specification in Such a way as to Enable One Skilled in the Art to Make and/or Use the Invention; and

(B) Whether Claims 1 - 18 are Indefinite for Failing to Particularly Point Out and Distinctly Claim the Subject Matter that Appellants Regard as Their Invention.

(7) GROUPING OF CLAIMS

For the purpose of this appeal, Appellants submit that, as different formal rejections are raised in the claims, none of the claims stand or fall together. Therefore, each of claims 1 - 18 are separately patentable for the reasons set forth hereinbelow.

(8) ARGUMENT

(A) The Formal Rejection of Claims 1 - 18 Under 35 U.S.C. § 112, First Paragraph, is in Error and Should be Reversed.

The Examiner asserts that the structure and operation of the motor driven manual

wrench has not been clearly set forth in the specification and drawings, and specifically that the structure of articulated joint 8, articulated body 9, adapter 12, spring 10, the motor, the torque limiter, structure of the motorized portion, the cooperation between the manual and motorized parts, and the operation of each of the above-noted elements has not been clearly defined. Appellants traverse the Examiner's assertions.

Appellants initially note that the discussion of the background information concedes that motor driven manual wrenches are well known in the art, as are torque wrenches having articulated joints. The instant invention is directed to a single hand-held tool that combines the advantages of both known wrenches to avoid the heretofore necessity of utilizing two separate tools to perform the two-step tightening process.

As discussed in the instant application, motor driven wrenches having torque limitation and even automatic shut-off when a preset torque is achieved are known, *see, e.g.*, U.S. Patent No. 4,060,137. (Specification page 2, lines 26 - 36). While this wrench, as discussed in the application, is only operable via the motor drive, not by hand, and the precision for the release by the torque limiter is insufficient for many safety related tightening locations, the construction and use of this device is known.

Moreover, as depicted in Figure 1, head 1 is attached to the drive motor through shaft 2. Further, it would have been apparent to one ordinarily skilled in the art reviewing the schematic illustration in Figure 1 that a rotor, driven by the motor drive, extends from shaft

2 to a beveled gear that engages with a beveled gear coupled to output shaft 4. Thus, the drive motor drives output shaft 4 in a conventional manner, and one ordinarily skilled in the art would certainly be able to replicate such a conventional operation without undue experimentation.

Still further, Appellants note that, as the invention is directed to a motor driven manual wrench and not to the specifics of the drive motor, the discussion provided in the instant application, in conjunction with the drawings, would fully enable those skilled in the art to make and use the invention.

The motor driven manual wrench of the instant invention, in addition to the motor driven feature, also includes a manual torque wrench feature to enable precise torque setting of the driven element. As is discussed in the application, manual torque wrenches are well known in the art, *see, e.g.*, German Patent Application No. 25 20 250 A1 and German Patent Application No. 296 18 817 U1. (Specification page 3, lines 15 - 17). It is noted that these known wrenches have a torque limiter and a ratchet drive.

Appellants submit that Figure 2 of the instant application clearly illustrates a schematic of the torque limiter 5 of the instant application, in which a ratchet drive 6 is coupled to output shaft 4, thereby enabling manual tightening through a socket attached to output shaft 4. Moreover, articulated joint 8 is composed of an articulated body 9 arranged between a support 15 and a spring 10. In a known manner, the tension of spring 10 can be

set, via set screw 11, to a target torque so that, upon manually tightening to the target torque, the articulated body breaks the connection, in the conventional manner, between support 15 and spring 10 to indicate that the target torque has been attained.

Appellants note the individual elements in the instant application are well known, and that it is the specific arrangement of the motor driven shaft together with a manual ratchet drive with an additional torque limiter that distinguishes the instant invention over the art of record. Further, Appellants note that Figure 1 clearly schematically illustrates the interconnection between the two separately drivable wrenches in such a manner that those ordinarily skilled in the art would be able to make and/or use the instant invention without undue experimentation. In fact, Appellants submit that those ordinarily skilled in the art would readily understand the invention merely from schematic illustrations of Figures 1 and 2, and, even without any further disclosure, would be able to make and/or use the instant invention.

It is well known that the test for determining compliance with the written description requirement of §112 is whether the disclosure of the application as originally filed reasonably conveys to an artisan with ordinary skill that the inventors had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language under consideration. See *In re Kaslow*, 707 F.2d 1366, 217 USPQ 1089 (Fed. Cir. 1983). Moreover, it is not necessary that the claimed subject

matter be described identically, but the disclosure originally filed must convey to those skilled in the art that applicant had invented the subject matter later claimed. See *In re Wilder*, 736 F.2d 1516, 222 USPQ 369 (Fed. Cir. 1984).

Because the instant invention is directed to a combination of conventional wrenches into a single inventive tool, and because the Figures clearly show the interconnection of these conventional wrenches into the single inventive tool, Appellants submit that the individual construction and operation of the separate tools is well known to those ordinarily skilled in the art, and that such individuals would be able to make and/use the instant invention upon review of the present disclosure and figures.

Accordingly, Appellants respectfully submit that, in view of the foregoing, claims 1 - 18 are fully enabled by the original disclosure, and, therefore, are fully in conformance with the requirements of 35 U.S.C. § 112, first paragraph. Thus, Appellants submit that the rejection of claims 1 - 18 under 35 U.S.C. § 112, first paragraph, is improper, and request that the Board reverse the Examiner's decision to finally reject these claims and remand the application to examining group for withdrawal of this formal rejection.

(B) The Formal Rejection of Claims 1 - 18 Under 35 U.S.C. § 112, Second Paragraph, is in Error and Should be Reversed.

The Examiner asserts that the term "motor driven manual wrench" appears contradictory, and asserts that various other elements are not clear. Appellants traverse the

Examiner's assertions.

Appellants submit that there is no contradiction in reciting the instant invention as a "motor-driven manual wrench." In particular, Appellants note that this term finds explicit support in the instant application, *see, e.g.*, page 3, lines 19 - 21, and also clearly sets forth the subject matter of the instant invention, i.e., a wrench which is motor driven to a first prescribed torque and then manually operated to a target torque.

Initially, Appellants note that the purpose of the second paragraph of §112, as stated in *In re Hammack*, 427 F.2d 1378, 1382, 166 USPQ 204, 207-08 (CCPA 1970),

is to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance.

That is, it is to ensure that the metes and bounds of the claims can be accurately determined. Furthermore, claims in a pending application are given their broadest reasonable interpretation consistent with the specification. *See In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983).

Thus, Appellants submit that the term "motor-driven manual wrench" clearly and unambiguously sets forth the subject matter that the inventors regard as their invention. Moreover, Appellants submit that one ordinarily skilled in the art, after reviewing the specification and drawings, would readily understand the term "motor-driven manual

wrench” as well as the scope of the claims.

With regard to the rejection of claims 2, 3, 7 - 12, and 14 - 16, Appellants submit that the rejection is improper and should be reversed. In particular, the Board’s attention is directed to the specification page 5, lines 11 - 29, which provides explicit support for the recited coupling of the head to the drive motor, as recited in at least claims 2 and 3. Further, the Board’s attention is directed to the specification page 6, lines 14 - page 7, line 11, which provides explicit support for the recited displays and sensors, as recited in at least claims 7 - 12. Moreover, the Board’s attention is directed to the specification page 7, line 24 - page 8, line 8, which provides explicit support for the features recited in each of claims 14 - 16.

As the original disclosure provides support for the features recited in each of claims 2, 3, 7 - 12, and 14 - 16, Appellants submit that the Examiner’s asserted basis for rejection, i.e., that the recited features are not supported by the specification, is in error, and should be reversed.

Still further, Appellants submit that the features recited on lines 3 - 7 of claim 6 clearly and unambiguously recite the arrangement depicted in Figure 2. In particular, it is apparent from the drawings that the first support (support 15) is mounted to pivot around the axis of output shaft 4, which is located a distance from articulated body 9, and that the second support (spring 10) determines at what target torque articulated movement between articulated body 9 and support 15 will occur. Thus, Appellants submit that, as claim 6 clearly

sets forth the subject matter that the inventors regard as their invention, and as those ordinarily skilled in the art, upon review of the specification and claims, would readily understand the scope of claim 6, this claim is fully in conformance with the statute.

Appellants further note that the term “a flat output element” is discussed, as noted above, on page 7, lines 24 - 30 of the original disclosure. Moreover, Appellants submit that those ordinarily skilled in the art would understand this term as recited in claim 14, and be readily able to ascertain the scope of claim 14.

Accordingly, Appellants submit that claims 1 - 18 are fully in compliance with the requirements of 35 U.S.C. § 112, second paragraph, and request that the Board reverse the Examiner’s decision to finally reject claims 1 - 18 based upon such formal matter, and remand the application to the examining group for withdrawal of this formal rejection.

Moreover, as the pending claims have only been rejected based upon formal matters, which have been shown to be improper, Appellants request that Board remand the instant application to the examining group for early allowance.

(C) Conclusion


Claims 1 - 18 are fully in compliance with the requirements under 35 U.S.C. § 112, first paragraph; and claims 1 - 18 are fully in compliance with the requirements under 35 U.S.C. § 112, second paragraph. Specifically, the claims conform with the formal requirements of the statute. Accordingly, Appellants respectfully request that the Board

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reverse the formal rejections of the claims 1 - 18 under 35 U.S.C. § 112 and remand the application to the Examiner for withdrawal of the rejection.

Thus, Appellants respectfully submit that each and every pending claim of the present application meets the requirements for patentability, and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,
Konstanze SAATHOFF et al.



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Reg. No. 28,394 *LA 35,873*

October 29, 2002
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Attachments: Appendix : Claims on Appeal

APPENDIX

CLAIMS ON APPEAL

1. (Twice amended) Motor-driven manual wrench having a driving motor and a head having an output tool shaft for coupling to a driving tool, said wrench comprising:

a ratchet drive located in the head and a first torque limiter coupled to the ratchet drive and a second torque limiter coupled to the drive motor such that the wrench forms a manually operable torque wrench whose transmittable torque is determined by the first torque limiter.

2. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the head is removably coupled to the drive motor.

3. (Twice amended) The motor-driven manual wrench according to claim 1, further comprising an adapter which is connected to a drive shaft of the head and to an output shaft of the motor.

4. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the head is designed as an angle head having said output tool shaft offset relative to a drive shaft of the head.

5. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the first torque limiter is designed to be adjustable such that the transmittable tightening torque is adjustable to specified values.

6. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the first torque limiter has an articulated joint with an articulated body held between

a first support and a second support, said first support being pivotably mounted at a distance from the articulated body, said second support enabling an articulating motion between the first support and the articulated body, said first support having a pivot axis coinciding with an axis of a shaft whose transmittable torque is limited by the torque limiter.

7. (Twice amended) The motor-driven manual wrench according to claim 1, further comprising a visual display which is activatable when a specified tightening torque is obtained.

8. (Twice amended) The motor-driven manual wrench according to claim 7, wherein the display is mechanically activatable

9. (Twice amended) The motor-driven manual wrench according to claim 1, further comprising an electrical sensor which generates a signal when a specified tightening torque is obtained.

10. (Twice amended) The motor-driven manual wrench according to claim 9, further comprising an electronic circuit which is effectively connected to the sensor, the circuit activating at least one of an acoustic signal and a visual display when the predetermined number of driving operations implemented with a specific tightening torque is obtained.

11. (Twice amended) The motor-driven manual wrench according to claim 9, wherein an electronic circuit activates at least one of an acoustic signal and a visual display

when a signal is received from the sensor.

12. (Twice amended) The motor-driven manual wrench according to claim 8, wherein the display is located at the head.

13. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the wrench is configured as an elongate rod-type wrench.

14. (Twice amended) The motor-driven manual wrench according to claim 1, wherein the head further comprises a flat output element coupled to the output tool shaft.

15. (Twice amended) The motor-driven manual wrench according to claim 1, further comprising a wireless power supply for the motor.

16. (Twice amended) The motor-driven manual wrench according to claim 1, further comprising a tubular housing accommodating the motor and an output shaft of the motor, said housing is designed with high bending strength, which bending strength during manipulation of the wrench allows for the transmission of considerably higher tightening torques to the output tool shaft than from the motor drive, with the rod-shaped housing having a grip area for manual actuation of the wrench.

17. (Twice amended) The motor-driven manual wrench according to claim 16, wherein the housing is formed of metal.

18. (Twice amended) The motor-driven manual wrench according to claim 17, wherein the metal is light metal.